



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,537	11/26/2003	Paul Scott	3063.VIN	8673
40256	7590	04/18/2006	EXAMINER	
FERRELLS, PLLC P. O. BOX 312 CLIFTON, VA 20124-1706			YAO, SAMCHUAN CUA	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/723,537

Applicant(s)

SCOTT ET AL.

Examiner

Sam Chuan C. Yao

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandran et al (US 5,252,663) in view of Walker et al (US 5,633,334) and vice versa.

With respect to claims 1 and 3-6, in discussing a related prior art, Chandran et al discloses that an aqueous based emulsion of "vinyl ester, particularly those prepared from vinyl acetate and ethylene" has a wide application in industry as an adhesive or as a binder for non-woven web such as an air-laid web, and further discloses that a protective colloid such as a polyvinyl alcohol may be incorporated into a vinyl-acetate type aqueous based emulsion (col. 1 lines 7-21; col. 3 line 27 to col. 4 line 68). Chandran et al also teaches synthetic or natural fibers such as cellulose acetate fibers, wood pulp fibers, etc as being suitable for making nonwoven webs (col. 4 lines 47-68), and further discloses preferably applying an aqueous binder emulsion to an air-laid web in an amount 20-45 part per 100 part of starting web to make a nonwoven web (col. 5 lines 13-18). While Chandran et al teaches incorporating a polyvinyl alcohol protective colloid to a vinyl-acetate emulsion where N-(2,2-dialkoxy-1-hydroxy)ethyl acryamide (DMHEA) has been added to the emulsion (example 17), it is unclear whether

Art Unit: 1733

Chandran et al envisions incorporating a polyvinyl alcohol protective colloid to prior art vinyl acetate binder (i.e. free of DMHEA). Moreover, Chandran et al does not teach an amount of protective colloid which is incorporated into the prior art binder. However, it would have been obvious in the art to incorporate about 2-8% by weight of protective colloid consisting of various types of hydrolyzed polyvinyl alcohols to a prior art vinyl acetate binder disclosed by Chandran et al, because Walker et al, drawn to an aqueous binder of a type which is substantially similar to the prior art vinyl acetate binder disclosed by Chandran et al, discloses the desirability of forming such a binder water-based emulsion having improved adhesive properties, the emulsion comprises 79-96% by weight of ethylene-vinyl acetate and 2-8% by weight of protective colloid consisting of various types of hydrolyzed polyvinyl alcohol; and further discloses that it is a common practice in the art to incorporate a protective colloid such as a polyvinyl alcohol to an aqueous emulsion of vinyl acetate (abstract; col. 1 lines 9-19; col. 2 lines 7-35).

**Alternatively,** Walker et al discloses a binder water-based emulsion having improved adhesive properties, the emulsion comprises 79-96% by weight of ethylene-vinyl acetate and 2-8% by weight of protective colloid consisting of various types of hydrolyzed polyvinyl alcohol (abstract; col. 1 lines 9-19; col. 2 lines 7-35). Walker et al does not teach using the binder for making a non-woven web. However, since Chandran discloses that an aqueous based emulsion of "vinyl ester, particularly those prepared from vinyl acetate and ethylene" has a wide application in industry as an adhesive or as a binder for non-woven web such

Art Unit: 1733

as an air-laid web, and further discloses that a protective colloid such as a polyvinyl alcohol may be incorporated into a vinyl-acetate type aqueous based emulsion (col. 1 lines 7-21; col. 3 line 27 to col. 4 line 68), it would have been obvious in the art to apply a binder water-based emulsion of Walker et al for bonding fibers to make a non-woven web such as an air-laid web.

As for the recited amount of binder in a finished non-woven web, one in the art would have determined, by routine experimentation, a workable amount of binder which is needed for the desired end-used of the finished non-woven web.

Moreover, Chandran et al discloses preferably applying an aqueous binder emulsion to an air-laid web in an amount 20-45 part per 100 part of starting web for making a nonwoven web (col. 5 lines 13-18). For this reason, it would have been obvious in the art to form a nonwoven web using an aqueous binder of Walker et al where the binder is preferably about 20 part/100 part of the web in order to form a web having the desired characteristic.

Although not positively recited in claim, since cellulose ester fibers such as cellulose acetate fibers, wood fibers, etc are typical fibers for making nonwoven webs in the art as exemplified in the teachings of Chandran et al (col. 4 lines 47-68) depending on the desired end-use of a finished nonwoven web, it would have been obvious in the art to use these types of fibers in forming a nonwoven web using a binder taught by Walker et al.

**As for an intended application of a finished nonwoven web, while none of the above references teaches using a finished nonwoven web for making a**

Art Unit: 1733

**cigarette filter**, such is immaterial as long as the finished non-woven web is capable of being used for making tobacco filter, because the claimed invention as presently recited does not positively require forming a cigarette filter, rather only require forming a nonwoven which is suitable for making cigarette filters.

The finished nonwoven is taken to be capable/suitable for being used as cigarette filter, because the binder composition of Walker et al or a prior art binder composition disclosed by Chandran et al and along with fibers which are used for making nonwoven webs are substantially similar, if not, identical binder composition of the present invention as evidence from claims 1-6 and applicant's specification in the background of the invention, it would be reasonable to expect that a finished nonwoven web is capable of being used for making cigarette filters.

With respect to claim 2, while Chandran teaches using wood pulp for making non-woven webs (col. 4 lines 47-68), it is unclear whether the wood pulp is fibrillated or fluff. In any event, since wood pulp fibrillated pulp/fluff pulp fibers are commonly used in the art for making latex bonded non-woven core in order to enhance the liquid absorbency the core, this claim would have been obvious in the art.

### ***Response to Arguments***

3. Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 1733

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richard Crispino can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao  
Primary Examiner  
Art Unit 1733

Scy  
04-17-06